

**Amendments to the Specification are as follows:**

Please amend paragraph [0027] – [0045] as follows:

[0027] Fig. 1a is a plan view of the motorway of an urban road system in accordance with the present invention.

[0028] Fig. 1b is another plan view of the motorway of an urban road system in accordance with the present invention.

[0028][0029] Fig. 2 is a schematic view of the motorway and footway of an urban road system in accordance with the present invention.

[0030] Fig. 3a is a perspective view of the motorway and footway (traffic lane for non-motor vehicles) of an urban road system in accordance with the present invention.

[0031] Fig. 3b is the second perspective view of the motorway and footway (traffic lane for non-motor vehicles) of an urban road system in accordance with the present invention.

[0032] Fig. 3c is the third perspective view of the motorway and footway (traffic lane for non-motor vehicles) of an urban road system in accordance with the present invention.

[0029][0033] Fig. 34 is a schematic plan view of the footway (traffic lane for non-motor vehicles) of an urban road system in accordance with the present invention.

[0034] Fig. 5 is a schematic view of aerial square in the layer of footway over the minor arterials square.

[0030][0035] Fig. 4Fig. 6 is a schematic plan view of the road for turnaround of an urban road system in accordance with the present invention.

[0034][0036] Fig. 57 is a schematic plan view of the branch road (T-shape road) in the motorway at the city boundary or in the city of an urban road system in accordance with the present invention.

[0032][0037] Fig. 6<sub>8</sub> is a schematic view of a separate fly-over type bridge at the branch road on the expressway in accordance with the present invention.

[0038] Fig. 9 is a perspective view of a separate type fly-over bridge at the branch road on the expressway in accordance with the present invention.

[0039] Fig. 10 is a perspective view of up-cross separate type fly-over bridge.

[0040] Fig. 11 is another perspective view of up-cross separate type fly-over bridge.

#### DETAILED DESCRIPTION

[0033][0041] As shown in Figs. 1-2<sub>3</sub>, a full interchange urban road system of the present invention is essentially a chessboard-shaped road network, which comprises a road for motor vehicles 1 and a footway 2 that performs the function of a traffic lane for non-motor vehicles. The road system is comprised of a double-layer road structure. The motor way 1 of the first road layer is on the ground, and the second layer is footway layer 2 at a suitable elevation accordingly over the motor way 1. The width of the footway 2 corresponds to the width of the motor way 1, or the footways 2, 3, 4 with proper width are located respectively at each side above the two sides of motor way 1. Alternatively, the two kinds of road systems are employed in an urban road system respectively in one city. When the footways 3, 4 (traffic lanes for non-motor vehicles) are designed over the both sides of the driveway 1 (motor way).

they are connected across with the passageway 5 (as shown in Fig. 3c and Fig. 4). The parapet 14 is employed along at least one side of footways 3 or 4. Part of the footway layer 2 of collector streets or the intersection of footway layer 2 is constructed as a ring pathway or an aerial square 18 (as shown in Fig. 35).

[0034][0042] The motor way 1 comprises expressways 6 and minor arterials 7. One minor arterial 7 is built between two expressways 6 for performing as the ramp of expressway 6 and access to the collector street (driveway of residential quarter, not shown in the drawing).

[0035][0043] A separate fly-over bridge type 9 (as shown in Fig. 3, Fig. 10 and Fig. 11) is arranged at an intersection 8 of the two expressways 6. The minor arterials 7 perform the function of a ramp of the fly-over bridge for the motor way 1. The width of minor arterials 7 is generally narrower than that of expressways 6. Preferably it is U2 width of that of expressways 6 so as to decrease the occupation for land. Meanwhile the minor arterials 7 perform the function of a ramp of motor way 1. The separate fly-over type bridge 9 may be fly-over or tunnel mode. The alignment mode disclosed in the prior art for constructing the bridge in the vertical and horizontal direction can be chosen flexible, not limited with interlaced arrangement as shown in Fig. 1.

[0036][0044] With reference to Figs. 4 and 16 at least one turnaround passageway 10 is designed between or above the two intersecting expressways. A plurality of turnaround passageways 10 can be employed according to the length between intersections and the actual requirement so as to reduce the distance of circumambulating. In addition, a turnaround passageway may be designed under the separate fly-over type bridge 9 at the intersections 8, 81 of expressways 6 (not shown in the drawing).

[0037][0045] The expressway 6 of the present invention may be constructed according to any kind of expressway disclosed in the prior art, the width of which is chosen to be several-way traffic.

[0038][0046] The first floor of building 19 beside the expressway 6 and/or minor arterials 7 has aerial layers 11 that are formed between the ground and the building roof 12. The

aerial layers 11 are used for parking areas, urban forestation, construction for means of transportation, as well as circumnavigating of vehicles under emergency. When the footway layer 3 or 4 is adjacent to the building, it is connected with the building roof 12 directly. It makes the travel convenient and the parapet adjacent to the building may be omitted.

[0039][0047] The first floor layers of the buildings on the ground are aerial layers that are used for parking areas, urban forestation so as to improve the urban ventilation and relieve the heat island effect in city.

[0040][0048] There are branch roads (T-shape roads) at the boundary of the city and in the city, such as locations near to railways, rivers and so on. For turning left, either a U-turn road (turnaround passageway) 99 (as shown in Fig. 7) or a particular ramp is located near the branch road (as shown in Fig. 58 and Fig. 9). Alternatively, a separate fly-over type bridge for left turns is designed at the branch road of the expressway (as shown in Fig. 5). Moreover, the branch road is located on the minor, arterial 71 to eliminate the branch road on the expressway 6 as shown in the upper part of Fig. I, and this minor arterial is one way only to perform the function of a ramp of the expressway.

[0041][0049] Referring to Fig. 1, the traffic method of using the above-mentioned fullinterchange urban road system comprises: if a vehicle departs from location of A to that of B, it may turn right at the location of D, the intersection 61 of expressway 6 and minor arterials 7. Due to no left turn on the expressway 6; it turns right at the location of M and turns right again when it proceeds to the crossroad 17 of minor arterials 7 (location of L). The vehicle goes ahead and turns right again at the location of O (83), then keeps straight on till to the, location of B. The whole route is indicated as A-C-D-M-L-C-O-P-B. In this embodiment, the road from D to M to L acts as a ramp. Alternatively, the vehicle keeps straight on from location A to that of H,

then arrives at the terminal B by passing through the crossroads of H, I, J, G and Q by keeping straight on and turning right continuously. In this case, the section of path G-H-I-J performs the function of a ramp. A vehicle may turn around at the turnaround passageway (10) located at F-G, and turns right at the crossroad of E and P respectively, then keeps straight on to terminal 8 in accordance with Fig. 4Fig. 6. No traffic light is on the expressway, so the driving speed is improved obviously.

[0042][0050] Right-turn only or routine management mode can be taken at the intersection 16 or 17 (as shown in Fig. 1) between minor arterials 7.

[0043][0051] As shown in Fig. 1, iff a vehicle departs from location of A to the terminal of Z opposite to the location of B, except the route mentioned above, it only needs to turn around at the turnaround passageway 10 at the point X shown in Fig. 6, then keeps straight on to the terminal Z. Any two locations in the city can be connected by above-mentioned routes.

[0044][0052] For a country where the traffic keeps to the left, the vehicle turns left along the travel direction instead of the above right-turn.

[0045][0053] The traffic system of the present invention solves the problem of traffic jams and congestion, difficulty in finding parking areas and the separation of pedestrians and vehicles under the urban planning of residential clusters. The time spent on road is shortened, and the traffic quality may not be affected by the expanding of urban scale.

[0046][0054] The interchange and overcrossing structures have the advantage of saving a great deal of coverage of urban road area. It is estimated that the capacity for vehicles may increase 3 to 4 times. The time taken for the same distance may shorten one time. The investment of urban road for each vehicle capacity may decrease one time. The fees for traffic

control may reduce to 1/3 of the fees comparing the present invention with the existing road system under the existing coverage ratio of urban road area.

[0047][0055] The traffic system and method of the present invention can be applied either into building a new city or the reconstruction of an old city. A new urban area according to the present invention may be designed bordering upon the old city during the old urban renewal, and the traffic capacity in the old city may be reduced gradually. Then the roads in the old city may be reconstructed step by step in accordance with the buildings' life times. In addition, the pavement may be built on stilts at a suitable elevation. Separate fly-over type bridges may also be provided and parts of minor arterials and collector streets may be used as ramps of separate fly-over type bridges so that the major arterials will change into expressways soon, and the traffic of the old city may be improved.